

Berkeley Homes – Saunders Road, Oxford



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Built on Oxford's former bus depot, this new housing development was required to meet both Parts 3 and 25 of the Planning Policy Guide, whilst upholding the environmental aspirations of Oxfordshire County Council and Berkeley Homes, both of whom are pioneering sustainable modern working practices.

Developed around contemporary residential living, the area was specifically designed as a 'Home Zone', where people share the space with the provision for traffic. The development plans also included the Authority taking responsibility for maintaining the new highway, and as part of their ongoing Adoption Policy it was to be transferred under Section 38 of the Highways Act 1980.

Phase 1 of the development occupies 1 hectare of land, and under the Water Industry Act 1991 it required the dispersion of water from the site to be 5 litres per second, per hectare. The solution to meet these requirements also had to offer an aesthetically pleasing environment, with long-term durability and the capability to withstand heavy vehicle and pedestrian use.

By design, the nature of Home Zones supports a hard landscaping scheme using concrete block paving materials, due to their excellent performance and aesthetic qualities. However, with the strict water discharge requirements in place, a Sustainable Urban Drainage system (SUDs) was essential for the project's success. Situated on a base of impermeable Oxford clay, the surface water run-off into the existing local sewerage networks needed to be managed effectively so as to not overload the system.

Following consultation with Berkeley Homes, the Council and Marshalls' Water Management Team throughout the planning stage, a SUDs solution was passed in keeping with environmental and sustainable strategies of all concerned. The service Marshalls provided to Berkeley Homes included aggregate testing and a comprehensive drainage solution for the area, supported by technical flow capacity data.

Priora, Marshalls' innovative system of permeable block paving was at the forefront of this concept. The unique shape of Priora creates voids, allowing surface water to filter through the aggregate at a controlled rate. Combined with the natural gradient of the area, the aggregate, sealed within a permeable membrane, acted as an 'attenuation system', slowing the release of surface water into the sewerage network, to a flow capacity well within the stipulated guidelines.

Marshalls' Priora system also provides added environmental benefits. Hydrocarbons within the sub-base break down contaminated run-off water, and any spillages remain contained within a small area and are not channelled on into further drainage systems.

Product performance tests at other sites, which imitated a 20 year in-service life span, showed that the interlocking joint profile of Priora succeeded in maintaining the stability of the paver surface despite the flexible nature of the bedding and base aggregates used.

Products Used:

- Priora

Specialist involved:



Marshalls

Transforming Britain's Landscapes

As well as being a historic and sustainable method of construction, the benefits of Marshalls' modern concrete manufacturing techniques, and its understanding of water management systems, has provided a unique solution that combines both an environmentally friendly structure with the aesthetics required for the modern urban environment.

Advancements in these areas have meant the development of sustainable concrete products as a proven and viable material for the future, whilst offering a realistic green solution in a world with an ever-increasing environmental conscience.



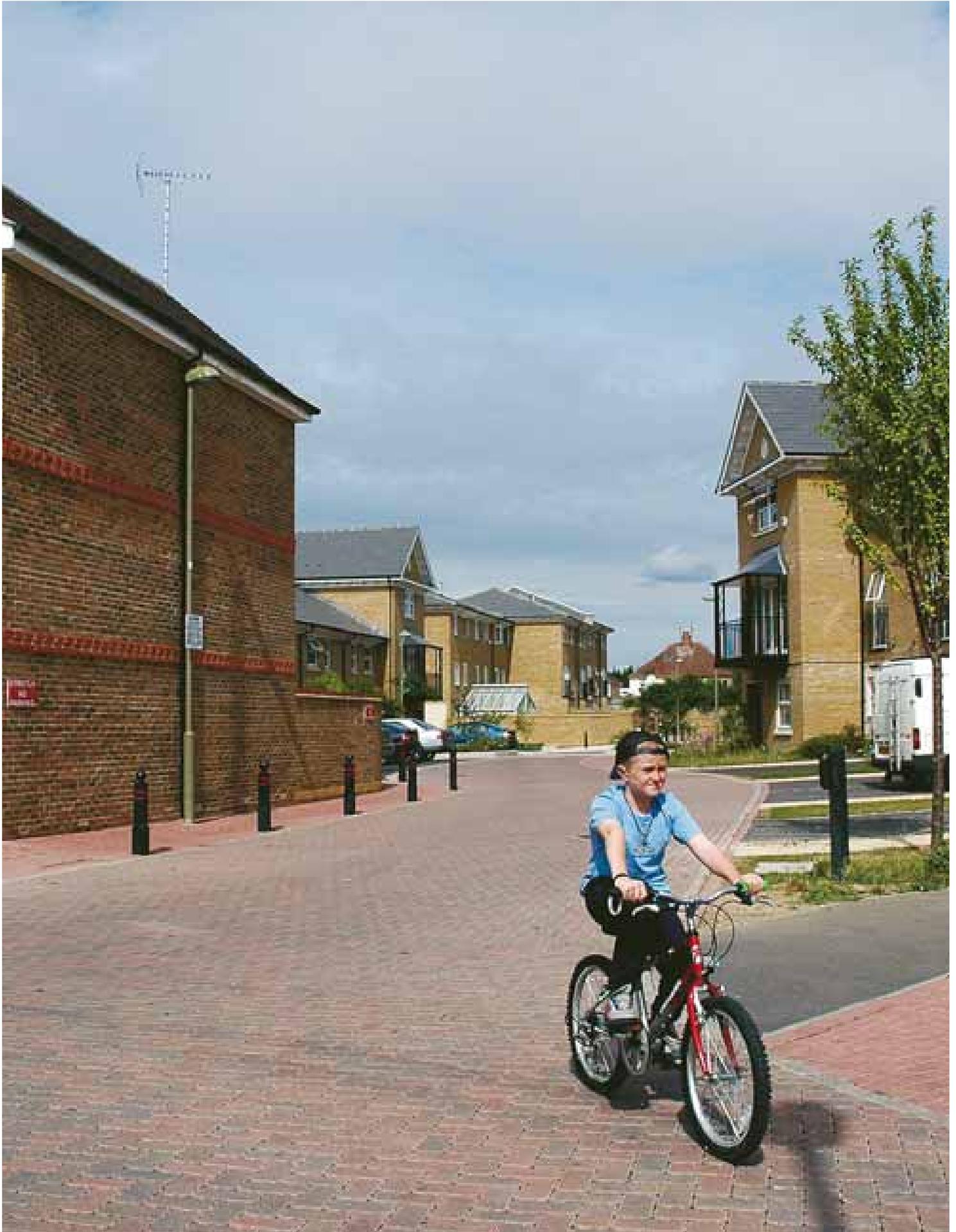
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